



# STIC Search Report

**EIC 1700**

STIC Database Tracking Number: 211329

**TO:** John Chu  
**Location:** Remsen 9d51  
**Art Unit :** 1752  
**January 3, 2007**  
**Phone:** 571-272-1329  
**Serial Number:** 10 / 533936

**From:** Jan Delaval  
**Location:** EIC 1700  
**Remsen 4a30**  
**Phone:** 571-272-2504  
  
**[jan.delaval@uspto.gov](mailto:jan.delaval@uspto.gov)**

## Search Notes

Banks, Kendra

211329

From: JOHN CHU [john.chu@uspto.gov]  
Sent: Tuesday, December 26, 2006 1:41 PM  
To: STIC-EIC1700  
Subject: Database Search Request, Serial Number: 10533936

Requester:  
JOHN CHU (P/1752)

Art Unit:  
GROUP ART UNIT 1752

Employee Number:  
68314

Office Location:  
REM 09D51

Phone Number:  
(571) 272-1329

Mailbox Number:

Case serial number:  
10533936

Class / Subclass(es):  
430/270.1

Earliest Priority Filing Date:  
11/04/02

Format preferred for results:  
Paper

Search Topic Information:  
Please search the compound in claim 1 and the process of preparing said compound in  
claim 2.

Also search the polymer and a process of making said polymer, which is made from the  
compound of claim 1.

The copolymer is then used in a photosensitive composition which also needs to be  
searched.

Thank you!

John

Note: the Class/subclass of 430/270.1 above is for the photosensitive composition.

Special Instructions and Other Comments:

SCIENTIFIC REFERENCE BH  
Sci & Tech Inf. Ctr.  
DEC 26 2006 REC'D  
Pat. & T.M. Office

Jan  
1/3/07

=> fil reg  
FILE 'REGISTRY' ENTERED AT 07:11:42 ON 03 JAN 2007  
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Property values tagged with IC are from the ZIC/VINITI data file  
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STRUCTURE FILE UPDATES: 2 JAN 2007 HIGHEST RN 916646-22-5  
DICTIONARY FILE UPDATES: 2 JAN 2007 HIGHEST RN 916646-22-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

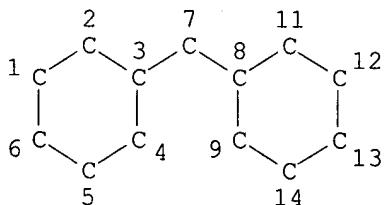
TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> d sta que 134  
L28 STR



NODE ATTRIBUTES:

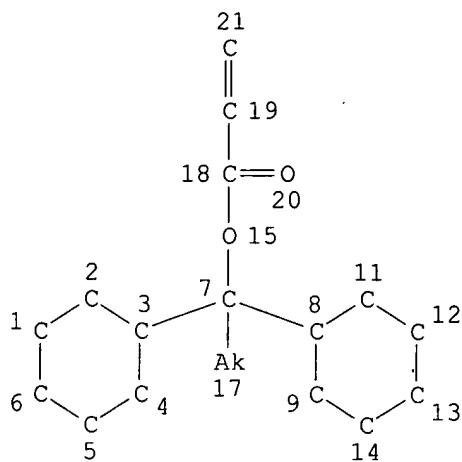
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 4 8  
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L30 14086 SEA FILE=REGISTRY SSS FUL L28  
L32 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 8 3

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L34 11 SEA FILE=REGISTRY SUB=L30 SSS FUL L32

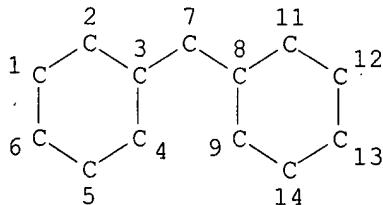
100.0% PROCESSED 230 ITERATIONS

11 ANSWERS

SEARCH TIME: 00.00.01

=&gt; d sta que 140

L28 STR



NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

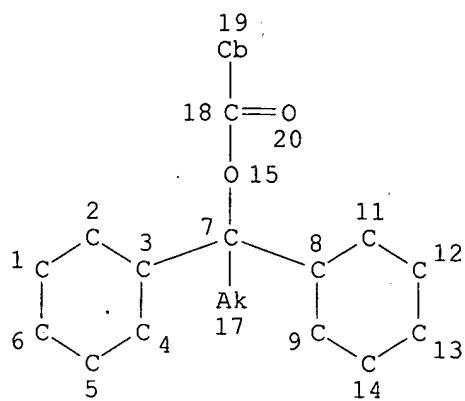
GRAPH ATTRIBUTES:

RSPEC 4 8

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L30 14086 SEA FILE=REGISTRY SSS FUL L28  
L37 STR



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 DEFAULT ECLEVEL IS LIMITED

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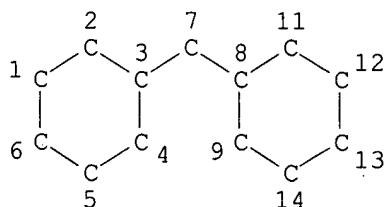
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L40 10 SEA FILE=REGISTRY SUB=L30 SSS FUL L37

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10 ANSWERS

=> d sta que 153  
 L28 STR



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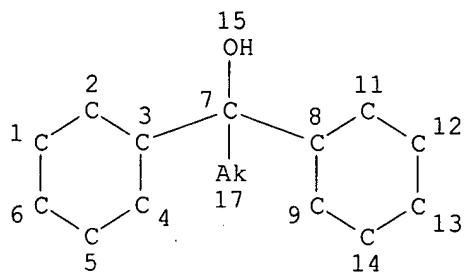
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L30 14086 SEA FILE=REGISTRY SSS FUL L28  
 L50 STR



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 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RSPEC 8 3  
 NUMBER OF NODES IS 15

## STEREO ATTRIBUTES: NONE

L53 23 SEA FILE=REGISTRY SUB=L30 CSS FUL L50

100.0% PROCESSED 3223 ITERATIONS  
 SEARCH TIME: 00.00.01

23 ANSWERS

=> d his

(FILE 'HOME' ENTERED AT 06:48:39 ON 03 JAN 2007)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 06:49:04 ON 03 JAN 2007

L1 1 S US20060019192/PN OR (US2005-533936# OR WO2002-KR2157 OR KR200  
 E SON/AU

L2 2 S E3  
 E SON E/AU

L3 14 S E47  
 E SON EUNK/AU  
 E SON NAME/AU

L4 17 S E4  
 E EUN/AU  
 E KANG/AU

L5 8 S E3  
 E KANG J/AU

L6 1171 S E3, E11, E12  
 E KANG JAE/AU

L7 2 S E3

L8 10 S E21  
 E KANG JAEH/AU

L9 2 S E5  
 E KANG NAME/AU

L10 17 S E4  
 E JAE/AU

L11 1 S E65  
 E JAEH/AU  
 E JAE NAME/AU

L12 1 S E4

L13                    E KIM/AU  
 45 S E3  
 E KIM D/AU  
 L14                    634 S E3, E6  
 E KIM DEOG/AU  
 L15                    34 S E4  
 E KIM DEOGB/AU  
 L16                    7 S E4  
 E KIM NAME/AU  
 L17                    343 S E4  
 E KIM J/AU  
 L18                    948 S E3  
 L19                    1705 S E14-E18  
 E KIM JAE/AU  
 L20                    16 S E3  
 L21                    46 S E75  
 L22                    285 S E111  
 E KIM JAEH/AU  
 L23                    56 S E18  
 E DEOG/AU  
 E DONGJIN/PA, CS  
 L24                    165 S E29-E35  
 L25                    194 S E3, E4  
 E DONG JIN/PA, CS  
 L26                    16 S E5-E41  
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 06:56:03 ON 03 JAN 2007

L27                    26 S E1-E26  
 L28                    STR  
 L29                    50 S L28  
 L30                    14086 S L28 FUL  
 - SAV TEMP L30 CHU533/A  
 L31                    140 S L30 AND 103.10/RID  
 L32                    STR L28  
 L33                    0 S L32 SAM SUB=L30  
 L34                    11 S L32 FUL SUB=L30  
 SAV L34 CHU533A/A  
 L35                    2 S L34 NOT L27  
 L36                    11 S L34, L35  
 L37                    STR L32  
 L38                    0 S L37 SAM SUB=L31  
 L39                    0 S L37 SAM SUB=L30  
 L40                    10 S L37 FUL SUB=L30  
 SAV L40 CHU533B/A  
 L41                    10 S L40 AND L31  
 L42                    21 S L36, L41  
 SAV L42 CHU533C/A  
 L43                    124 S L31 NOT L42

FILE 'HCAOLD' ENTERED AT 07:06:27 ON 03 JAN 2007

L44                    0 S L42

FILE 'HCAPLUS' ENTERED AT 07:06:31 ON 03 JAN 2007

L45                    2 S L42  
 L46                    1 S L45 AND L1-L26  
 L47                    2 S L45, L46

FILE 'REGISTRY' ENTERED AT 07:07:43 ON 03 JAN 2007

L48                    3 S L27 AND CL/ELS

L49 2 S L48 NOT MG/ELS  
 L50 STR L32  
 L51 13 S L50 SAM SUB=L30  
 L52 3 S L50 CSS SAM SUB=L30  
 L53 23 S L50 CSS FUL SUB=L30  
 SAV L53 CHU533D/A

FILE 'HCAPLUS' ENTERED AT 07:09:58 ON 03 JAN 2007  
 L54 8470 S L49  
 L55 27 S L53  
 L56 1 S L54 AND L55  
 L57 2 S L47,L56  
 SEL RN L57 2

FILE 'REGISTRY' ENTERED AT 07:10:28 ON 03 JAN 2007  
 L58 61 S E27-E87.

FILE 'USPATFULL' ENTERED AT 07:11:13 ON 03 JAN 2007  
 L59 1 S L42

FILE 'HCAPLUS, USPATFULL' ENTERED AT 07:11:30 ON 03 JAN 2007  
 L60 3 DUP REM L57 L59 (0 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 07:11:42 ON 03 JAN 2007

=> fil hcaplus  
 FILE 'HCAPLUS' ENTERED AT 07:12:29 ON 03 JAN 2007  
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FILE COVERS 1907 - 3 Jan 2007 VOL 146 ISS 2  
 FILE LAST UPDATED: 2 Jan 2007 (20070102/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 157 all hitstr retable tot

L57 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2004:413153 HCAPLUS  
 DN 140:431398  
 ED Entered STN: 21 May 2004  
 TI Chemically amplified polymer having pendant group with dicyclohexyl for photoresist composition  
 IN Son, Eun-Kyung; Kang, Jae-Hyun; Kim, Deog-Bae  
 ; Kim, Jae-Hyun /

PA Dongjin Semichem Co., Ltd., S. Korea  
 SO PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM G03F0007-039  
 ICS G03F0007-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38

## FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004042477	A1	20040521	WO 2002-KR2157	20021119 <--
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	KR 2004039731	A	20040512	KR 2002-67882	20021104 <--
	AU 2002368319	A1	20040607	AU 2002-368319	20021119 <--
	TW 242003	B	20051021	TW 2002-91136589	20021218 <--
	US 2006019192	A1	20060126	US 2005-533936	20050504 <--
PRAI	KR 2002-67882	A	20021104	<--	
	WO 2002-KR2157	W	20021119	<--	

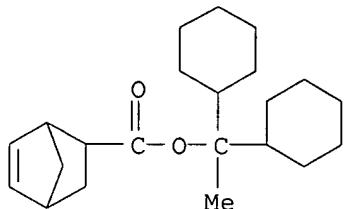
## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 2004042477	ICM	G03F0007-039
		ICS	G03F0007-027
		IPCI	G03F0007-039 [ICM, 7]; G03F0007-027 [ICS, 7]
		IPCR	C07C0067-00 [I, C*]; C07C0067-14 [I, A]; C07C0067-347 [I, A]; C07C0069-00 [I, C*]; C07C0069-54 [I, A]; C07C0069-753 [I, A]; C08F0220-00 [I, C*]; C08F0220-18 [I, A]; G03F0007-039 [I, C*]; G03F0007-039 [I, A]
		ECLA	C07C067/14+69/54; C07C067/347+69/753; C07C069/54; C07C069/753; C08F220/18; G03F007/039C1; G03F007/039C1S
	KR 2004039731	IPCI	G03F0007-027 [ICM, 7]
		ECLA	C07C067/14+69/54; C07C067/347+69/753; C07C069/54; C07C069/753; C08F220/18; G03F007/039C1; G03F007/039C1S
	AU 2002368319	IPCI	G03F0007-039 [ICM, 7]; G03F0007-027 [ICS, 7]
		IPCR	C07C0067-00 [I, C*]; C07C0067-14 [I, A]; C07C0067-347 [I, A]; C07C0069-00 [I, C*]; C07C0069-54 [I, A]; C07C0069-753 [I, A]; C08F0220-00 [I, C*]; C08F0220-18 [I, A]; G03F0007-039 [I, C*]; G03F0007-039 [I, A]
	TW 242003	IPCI	C07C0069-653 [ICS, 7]; C07C0069-00 [ICS, 7, C*]; G03F0007-027 [ICS, 7]
		IPCR	C07C0067-00 [I, C*]; C07C0069-00 [I, C*]; C08F0220-00 [I, C*]; G03F0007-039 [I, C*]; C07C0067-14 [I, A]; C07C0067-347 [I, A]; C07C0069-54 [I, A]; C07C0069-753 [I, A]; C08F0220-18 [I, A]; G03F0007-039 [I, A]
	US 2006019192	IPCI	G03C0001-492 [I, A]; G03C0001-005 [I, C*]
		IPCR	G03C0001-005 [I, C]; G03C0001-492 [I, A]; C07C0067-00 [I, C*]; C07C0067-14 [I, A]; C07C0067-347 [I, A]; C07C0069-00 [I, C*]; C07C0069-54 [I, A]; C07C0069-753

[I,A]; C08F0220-00 [I,C\*]; C08F0220-18 [I,A];  
 G03F0007-039 [I,C\*]; G03F0007-039 [I,A]  
 NCL 430/270.100  
 ECLA C07C067/14+69/54; C07C067/347+69/753; C07C069/54;  
 C07C069/753; C08F220/18; G03F007/039C1; G03F007/039C1S  
 OS MARPAT 140:431398  
 AB The present invention relates to a chemical amplified polymer having a pendent group with dicyclohexyl bonded thereto, a process for the preparation thereof, and a resist composition comprising it, and more particularly, to a novel (meth)acrylic or norbornene carboxylate compound with dicyclohexyl bonded thereto, a process for the preparation thereof, a chemical amplified polymer synthesized therewith, and a pos. photoresist composition for ArF comprising said polymer, with high resolution and excellent etching resistance.  
 ST chem amplified polymer pendant dicyclohexyl photoresist compn  
 IT Photoresists  
 (chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)  
 IT 691390-42-8P 691390-43-9P 691390-44-0P  
 691390-45-1P 691390-46-2P 691390-48-4P  
 691390-49-5P 691390-50-8P 691390-51-9P  
 691390-52-0P 691390-53-1P 691390-54-2P  
 691390-55-3P 691390-56-4P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)  
 IT 75-16-1, Methyl magnesium bromide 119-60-8, Dicyclohexyl ketone  
 542-92-7, Cyclopentadiene, reactions 814-68-6, Acryloyl chloride  
 920-46-7, MethAcryloyl chloride 2386-64-3, Ethyl magnesium chloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)  
 IT 53317-13-8P 615567-79-8P 691390-37-1P  
 691390-39-3P 691390-40-6P 691390-41-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)  
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE  
 (1) Fujitsu Limited; US 5968713 A 1999 HCPLUS  
 (2) Nippon Zeon Co Ltd; JP 1996101509 A 1996  
 (3) Samsung Electronic Co Ltd; KR 200247866 A 2002  
 (4) Shipley Company; KR 200140033 A 2001  
 (5) Shipley Company; KR 200185567 A 2001  
 IT 691390-42-8P 691390-43-9P 691390-44-0P  
 691390-45-1P 691390-46-2P 691390-48-4P  
 691390-49-5P 691390-50-8P 691390-51-9P  
 691390-52-0P 691390-53-1P 691390-54-2P  
 691390-55-3P 691390-56-4P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)  
 RN 691390-42-8 HCPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-39-3  
 CMF C22 H34 O2



CM 2

CRN 108-31-6  
 CMF C4 H2 O3

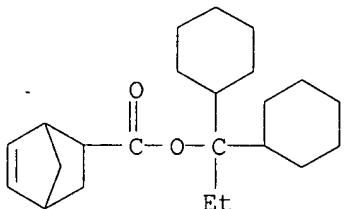


RN 691390-43-9 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-41-7  
 CMF C23 H36 O2



CM 2

CRN 108-31-6  
 CMF C4 H2 O3

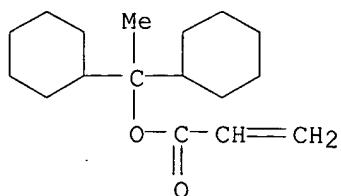


RN 691390-44-0 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with  
1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
NAME)

CM 1

CRN 691390-37-1  
CMF C17 H28 02



CM 2

CRN 120-74-1  
CMF C8 H10 O2



CM 3

CRN 108-31-6  
CMF C4 H2 O3

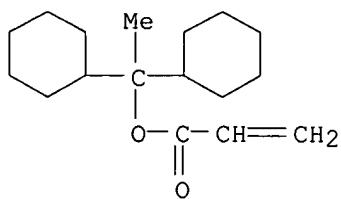


RN 691390-45-1 HCAPLUS

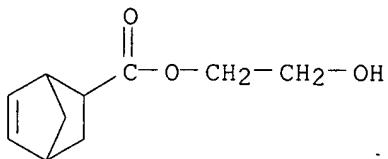
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer with 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

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CRN 691390-37-1  
CMF C17 H28 02



CM 2

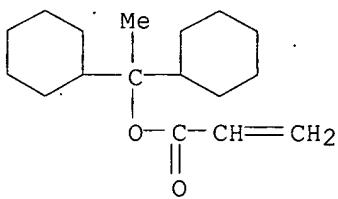
CRN 37503-42-7  
CMF C10 H14 O3

CM 3

CRN 108-31-6  
CMF C4 H2 O3

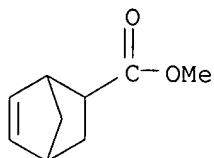
RN 691390-46-2 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with  
 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
 NAME)

CM 1

CRN 691390-37-1  
CMF C17 H28 O2

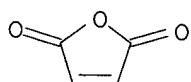
CM 2

CRN 6203-08-3  
 CMF C9 H12 O2



CM 3

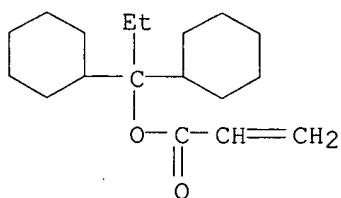
CRN 108-31-6  
 CMF C4 H2 O3



RN 691390-48-4 HCPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with  
 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
 NAME)

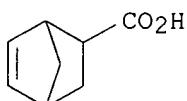
CM 1

CRN 691390-47-3  
 CMF C18 H30 O2



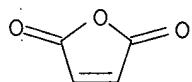
CM 2

CRN 120-74-1  
 CMF C8 H10 O2



CM 3

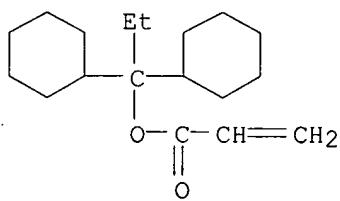
CRN 108-31-6  
 CMF C4 H2 O3



RN 691390-49-5 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

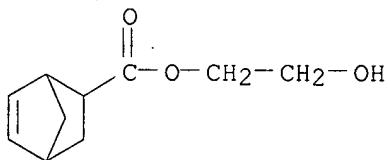
CM 1

CRN 691390-47-3  
 CMF C18 H30 O2



CM 2

CRN 37503-42-7  
 CMF C10 H14 O3



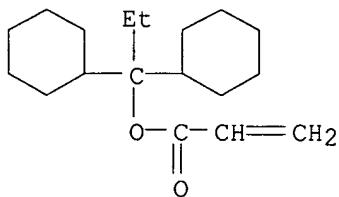
CM 3

CRN 108-31-6  
 CMF C4 H2 O3

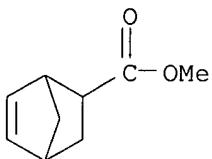


RN 691390-50-8 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-47-3  
CMF C18 H30 O2

CM 2

CRN 6203-08-3  
CMF C9 H12 O2

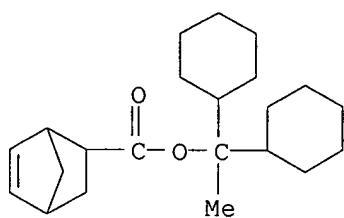
CM 3

CRN 108-31-6  
CMF C4 H2 O3

RN 691390-51-9 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

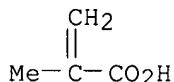
CRN 691390-39-3  
CMF C22 H34 O2



CM 2

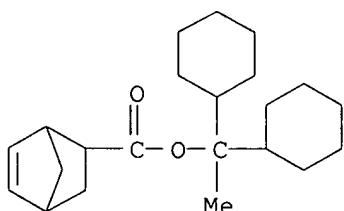
CRN 108-31-6  
CMF C4 H2 O3

CM 3

CRN 79-41-4  
CMF C4 H6 O2

RN 691390-52-0 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,  
 polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

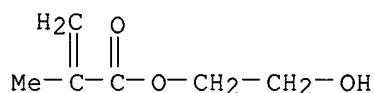
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CRN 691390-39-3  
CMF C22 H34 O2

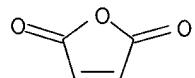
CM 2

CRN 868-77-9

CMF C6 H10 O3

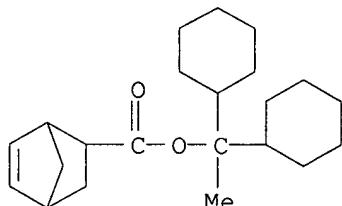


CM 3

CRN 108-31-6  
CMF C4 H2 O3

RN 691390-53-1 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

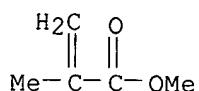
CRN 691390-39-3  
CMF C22 H34 O2

CM 2

CRN 108-31-6  
CMF C4 H2 O3

CM 3

CRN 80-62-6  
CMF C5 H8 O2



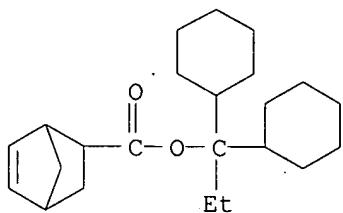
RN 691390-54-2 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 691390-41-7

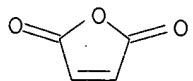
CMF C23 H36 O2



CM 2

CRN 108-31-6

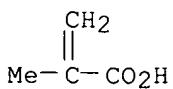
CMF C4 H2 O3



CM 3

CRN 79-41-4

CMF C4 H6 O2



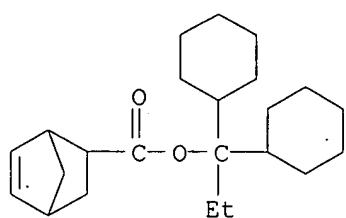
RN 691390-55-3 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

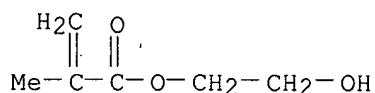
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CRN 691390-41-7

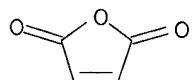
CMF C23 H36 O2



CM 2

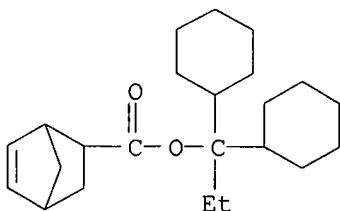
CRN 868-77-9  
CMF C6 H10 O3

CM 3

CRN 108-31-6  
CMF C4 H2 O3

RN 691390-56-4 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

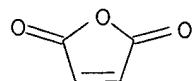
CM 1

CRN 691390-41-7  
CMF C23 H36 O2

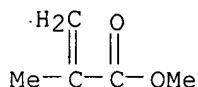
CM 2

CRN 108-31-6

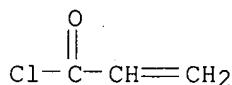
CMF C4 H2 O3



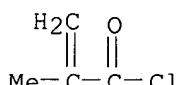
CM 3

CRN 80-62-6  
CMF C5 H8 O2

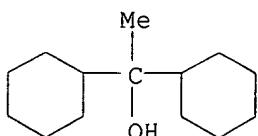
IT 814-68-6, Acryloyl chloride 920-46-7, MethAcryloyl chloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)  
 RN 814-68-6 HCPLUS  
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCPLUS  
 CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

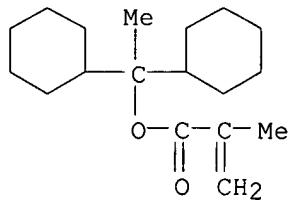


IT 53317-13-8P 615567-79-8P 691390-37-1P  
 691390-39-3P 691390-40-6P 691390-41-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)  
 RN 53317-13-8 HCPLUS  
 CN Cyclohexanemethanol,  $\alpha$ -cyclohexyl- $\alpha$ -methyl- (9CI) (CA INDEX NAME)



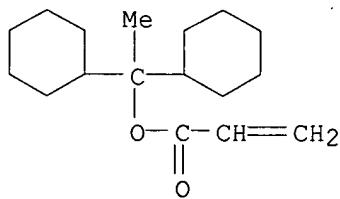
RN 615567-79-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)



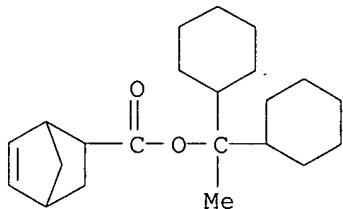
RN 691390-37-1 HCAPLUS

CN 2-Propenoic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)



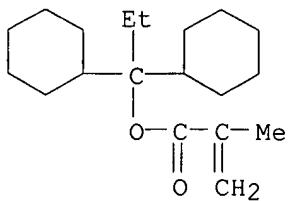
RN 691390-39-3 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)



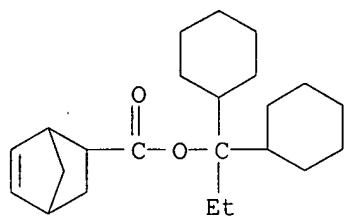
RN 691390-40-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX NAME)



RN 691390-41-7 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Fujitsu Limited	1999			US 5968713 A	HCAPLUS
Nippon Zeon Co Ltd	1996			JP 1996101509 A	
Samsung Electronic Co L	2002			KR 200247866 A	
Shipley Company	2001			KR 200140033 A	
Shipley Company	2001			KR 200185567 A	

L57 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:834253 HCAPLUS  
 DN 139:343474  
 ED Entered STN: 24 Oct 2003  
 TI Positive-working resist composition containing alkali soluble resin having (meth)acrylate repeating unit  
 IN Sato, Kenichiro; Kawabe, Yasumasa  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 73 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F0007-039  
 ICS C08F0220-00; C08F0232-00; G03F0007-004; H01L0021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38

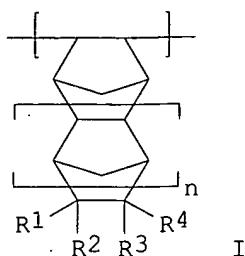
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003302762	A	20031024	JP 2002-109499	20020411
PRAI JP 2002-109499		20020411		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003302762	ICM	G03F0007-039
	ICS	C08F0220-00; C08F0232-00; G03F0007-004; H01L0021-027
	IPCI	G03F0007-039 [ICM,7]; C08F0220-00 [ICS,7]; C08F0232-00 [ICS,7]; G03F0007-004 [ICS,7]; H01L0021-027 [ICS,7]; H01L0021-02 [ICS,7,C*]
	IPCR	C08F0220-00 [I,A]; C08F0220-00 [I,C*]; C08F0232-00 [I,A]; C08F0232-00 [I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-039 [I,A]; G03F0007-039 [I,C*]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]

GI



AB The pos.-working resist composition used in a far-UV region comprises (A) a photoacid, (B) an alkali-soluble resin I ( $R1-4 = H, \text{halo, cyano, COOH, etc.}$ ; and  $n = 0, 1$ ), and (C) an alc. compound having a C7-15 alicyclic hydrocarbon group and an alc. OH group.

ST UV photoresist compn alkali soluble resin acrylate methacrylate; alc compd photoacid photoresist compn

IT Photoresists  
(UV; pos.-working resist composition containing alkali soluble resin having (meth)acrylate repeating unit)

IT Photoresists  
Resists  
(pos.-working resist composition containing alkali soluble resin having (meth)acrylate repeating unit)

IT 707-37-9 768-95-6, Tricyclo[3.3.1.13,7]decan-1-ol 770-71-8,  
Tricyclo[3.3.1.13,7]decan-1-methanol 775-64-4 4728-34-1 5240-72-2,  
Bicyclo[2.2.1]heptane-2-methanol 6240-11-5, Tricyclo[3.3.1.13,7]decan-1-ethanol 10347-01-0 14440-78-9, Bicyclo[2.2.1]heptane-2,3-diol 14575-03-2 17071-62-4 20098-14-0 28132-01-6 61065-61-0  
62978-80-7 67092-78-8 68435-07-4 92343-46-9 96314-52-2  
99181-50-7, Tricyclo[3.3.1.13,7]decan-1,3,5-triol 101725-90-0  
135359-64-7 240417-26-9 436852-32-3 615568-01-9,  
Bicyclo[2.2.1]heptane-1,4-diol 615584-35-5 615584-36-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alc. compound; pos.-working resist composition containing alkali soluble resin  
having (meth)acrylate repeating unit)

IT 181020-29-1 569372-93-6 615567-19-6 615567-21-0 615567-22-1  
615567-24-3 615567-27-6 615567-30-1 615567-34-5 615567-37-8  
615567-39-0 615567-41-4 615567-44-7 615567-47-0 615567-49-2  
615567-51-6 615567-53-8 615567-55-0 615567-58-3 615567-61-8  
615567-63-0 615567-66-3 615567-68-5 615567-72-1 615567-75-4  
615567-77-6 **615567-80-1**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alkali-soluble resin; pos.-working resist composition containing alkali soluble resin  
having (meth)acrylate repeating unit)

IT 144089-15-6 213740-84-2 241806-75-7 258872-05-8 284474-28-8  
474510-73-1 615567-09-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoacid; pos.-working resist composition containing alkali soluble resin  
having (meth)acrylate repeating unit)

IT **615567-80-1**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alkali-soluble resin; pos.-working resist composition containing alkali soluble resin  
having (meth)acrylate repeating unit)

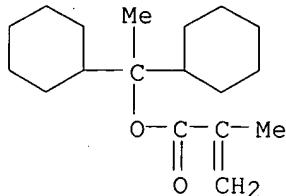
RN 615567-80-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester, homopolymer  
(9CI) (CA INDEX NAME)

CM 1

CRN 615567-79-8

CMF C18 H30 O2



=&gt; fil uspatfull

FILE 'USPATFULL' ENTERED AT 07:12:52 ON 03 JAN 2007

CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 2 Jan 2007 (20070102/PD)  
FILE LAST UPDATED: 2 Jan 2007 (20070102/ED)

HIGHEST GRANTED PATENT NUMBER: US7159245

HIGHEST APPLICATION PUBLICATION NUMBER: US2006294631

CA INDEXING IS CURRENT THROUGH 2 Jan 2007 (20070102/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 2 Jan 2007 (20070102/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2006

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2006

=&gt; d bib abs hitstr 159

L59 ANSWER 1 OF 1 USPATFULL on STN

AN 2006:21360 USPATFULL

TI Chemically amplified polymer having pendant group with dicyclohexyl and  
resist composition comprising the sameIN SON, Eun-Kyung, Hwaseong-city, KOREA, REPUBLIC OF  
Kang, Jae-Hyun, Hwaseong-city, KOREA, REPUBLIC OF  
Kim, Deog-Bae, Hwaseong-city, KOREA, REPUBLIC OF  
Kim, Jae-Hyun, Hwaseong-city, KOREA, REPUBLIC OF

PI US 2006019192 A1 20060126

AI US 2003-533936 A1 20021119 (10)  
WO 2002-KR2157 20021119

20050504 PCT 371 date

PRAI KR 2002-67882 20021104

DT Utility

FS APPLICATION

LREP FISH &amp; RICHARDSON PC, P.O. BOX 1022, MINNEAPOLIS, MN, 55440-1022, US

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 583

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a chemically amplified polymer having a  
pendant group with dicyclohexyl bonded thereto, a process for the

preparation thereof, and a resist composition comprising it, and more particularly, to a novel (meth)acrylic or norbornene carboxylate compound with dicyclohexyl bonded thereto, a process for the preparation thereof, a chemically amplified polymer synthesized therewith, and a positive photoresist composition for ArF comprising said polymer, with high resolution and excellent etching resistance.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 691390-42-8P 691390-43-9P 691390-44-0P  
 691390-45-1P 691390-46-2P 691390-48-4P  
 691390-49-5P 691390-50-8P 691390-51-9P  
 691390-52-0P 691390-53-1P 691390-54-2P  
 691390-55-3P 691390-56-4P

(chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

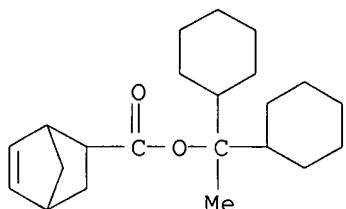
RN 691390-42-8 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-39-3

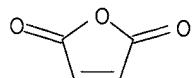
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CM 2

CRN 108-31-6

CMF C4 H2 O3



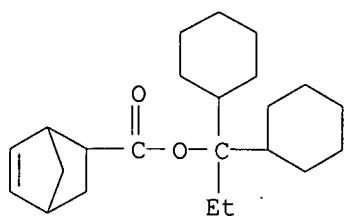
RN 691390-43-9 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

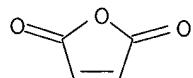
CM 1

CRN 691390-41-7

CMF C23 H36 O2

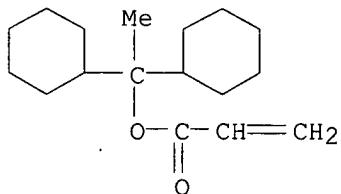


CM 2

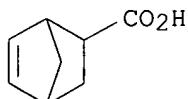
CRN 108-31-6  
CMF C4 H2 O3

RN 691390-44-0 USPATFULL  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with  
 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
 NAME)

CM 1

CRN 691390-37-1  
CMF C17 H28 O2

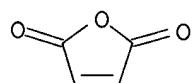
CM 2

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CMF C8 H10 O2

CM 3

CRN 108-31-6

CMF C4 H2 O3



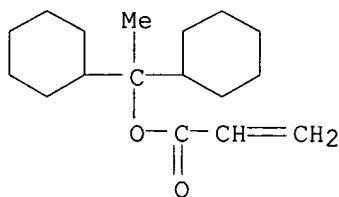
RN 691390-45-1 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymér  
with 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA  
INDEX NAME)

CM 1

CRN 691390-37-1

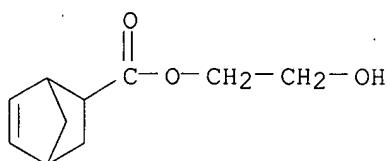
CMF C17 H28 O2



CM 2

CRN 37503-42-7

CMF C10 H14 O3



CM 3

CRN 108-31-6

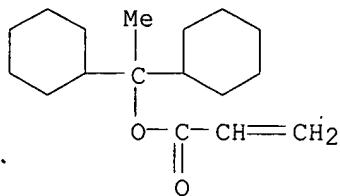
CMF C4 H2 O3



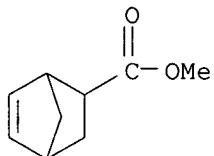
RN 691390-46-2 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with  
1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
NAME)

CM 1

CRN 691390-37-1  
CMF C17 H28 O2

CM 2

CRN 6203-08-3  
CMF C9 H12 O2

CM 3

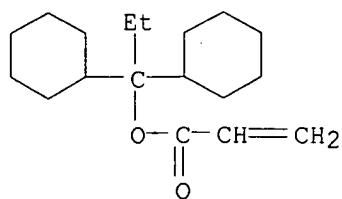
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RN 691390-48-4 USPATFULL

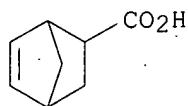
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with  
1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
NAME)

CM 1

CRN 691390-47-3  
CMF C18 H30 O2



CM 2

CRN 120-74-1  
CMF C8 H10 O2

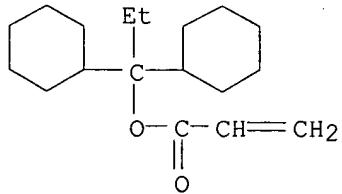
CM 3

CRN 108-31-6  
CMF C4 H2 O3

RN 691390-49-5 USPATFULL

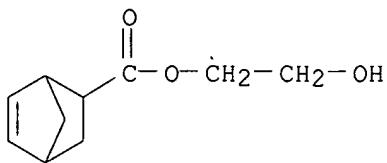
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-47-3  
CMF C18 H30 O2

CM 2

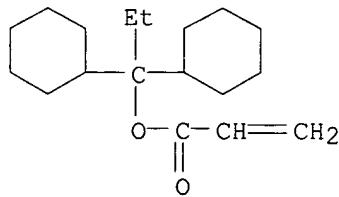
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CMF C10 H14 O3



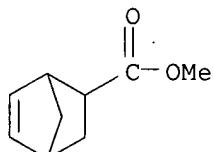
CM 3

CRN 108-31-6  
CMF C4 H2 O3RN 691390-50-8 USPATFULL  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with  
1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
NAME)

CM 1

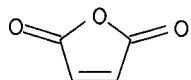
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CMF C18 H30 O2

CM 2

CRN 6203-08-3  
CMF C9 H12 O2

CM 3

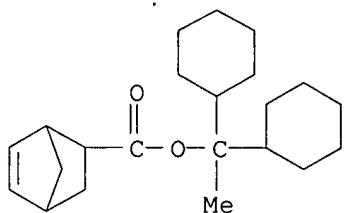
CRN 108-31-6  
 CMF C4 H2 O3



RN 691390-51-9 USPATFULL  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,  
 polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA  
 INDEX NAME)

CM 1

CRN 691390-39-3  
 CMF C22 H34 O2



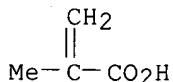
CM 2

CRN 108-31-6  
 CMF C4 H2 O3



CM 3

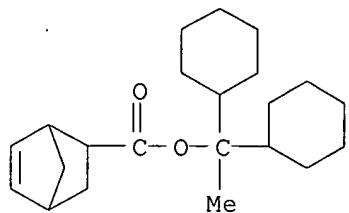
CRN 79-41-4  
 CMF C4 H6 O2



RN 691390-52-0 USPATFULL  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,  
 polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate  
 (9CI) (CA INDEX NAME)

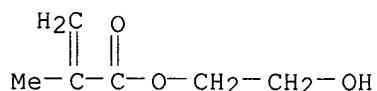
CM 1

CRN 691390-39-3  
 CMF C22 H34 O2



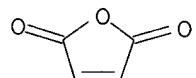
CM 2

CRN 868-77-9  
 CMF C6 H10 O3



CM 3

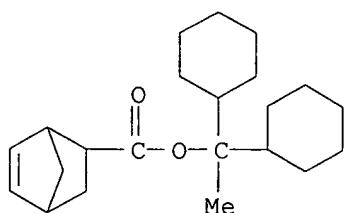
CRN 108-31-6  
 CMF C4 H2 O3



RN 691390-53-1 USPATFULL  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

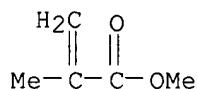
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 CMF C22 H34 O2



CM 2

CRN 108-31-6  
CMF C4 H2 O3

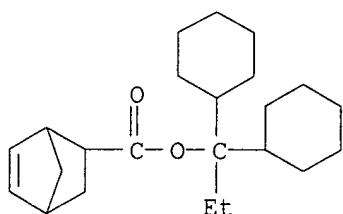
CM 3

CRN 80-62-6  
CMF C5 H8 O2

RN 691390-54-2 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,  
polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA  
INDEX NAME)

CM 1

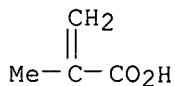
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CMF C23 H36 O2

CM 2

CRN 108-31-6  
CMF C4 H2 O3

CM 3

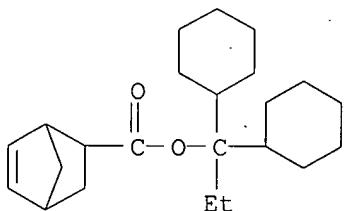
CRN 79-41-4  
 CMF C4 H6 O2



RN 691390-55-3 USPATFULL  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,  
 polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate  
 (9CI) (CA INDEX NAME)

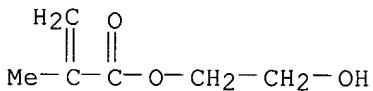
CM 1

CRN 691390-41-7  
 CMF C23 H36 O2



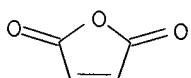
CM 2

CRN 868-77-9  
 CMF C6 H10 O3



CM 3

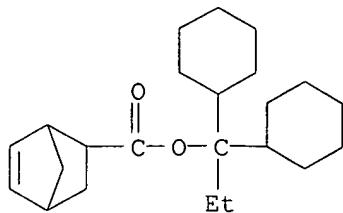
CRN 108-31-6  
 CMF C4 H2 O3



RN 691390-56-4 USPATFULL  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,  
 polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA  
 INDEX NAME)

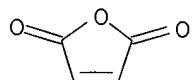
CM 1

CRN 691390-41-7  
 CMF C23 H36 O2



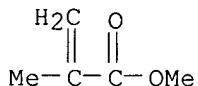
CM 2

CRN 108-31-6  
 CMF C4 H2 O3



CM 3

CRN 80-62-6  
 CMF C5 H8 O2

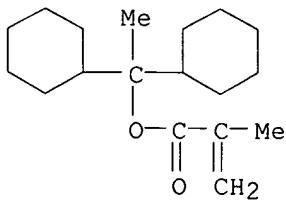


IT 615567-79-8P 691390-37-1P 691390-39-3P  
 691390-40-6P 691390-41-7P

(preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

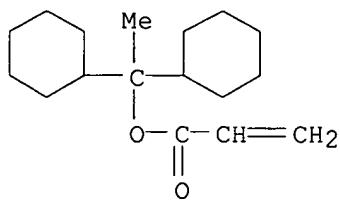
RN 615567-79-8 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)

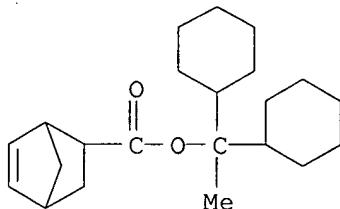


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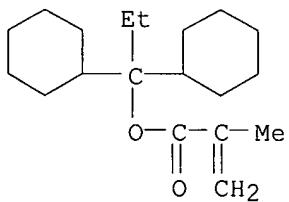
CN 2-Propenoic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)



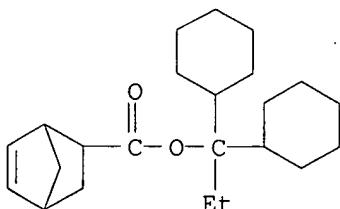
RN 691390-39-3 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester  
(9CI) (CA INDEX NAME)

RN 691390-40-6 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX  
NAME)

RN 691390-41-7 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester  
(9CI) (CA INDEX NAME)

=&gt; fil reg

FILE 'REGISTRY' ENTERED AT 07:13:19 ON 03 JAN 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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STRUCTURE FILE UPDATES: 2 JAN 2007 HIGHEST RN 916646-22-5  
 DICTIONARY FILE UPDATES: 2 JAN 2007 HIGHEST RN 916646-22-5

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

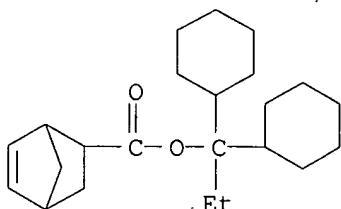
<http://www.cas.org/ONLINE/UG/regprops.html>

=> => d ide can tot 142

L42 ANSWER 1 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-56-4 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
 MF (C<sub>23</sub> H<sub>36</sub> O<sub>2</sub> . C<sub>5</sub> H<sub>8</sub> O<sub>2</sub> . C<sub>4</sub> H<sub>2</sub> O<sub>3</sub>)<sub>x</sub>  
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 PCT Polyacrylic, Polyether, Polyvinyl  
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 LC STN Files: CA, CAPLUS, USPATFULL

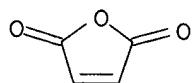
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 CMF C<sub>23</sub> H<sub>36</sub> O<sub>2</sub>

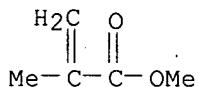


CM 2

CRN 108-31-6  
 CMF C<sub>4</sub> H<sub>2</sub> O<sub>3</sub>



CM 3

CRN 80-62-6  
CMF C5 H8 O2

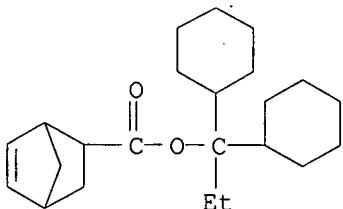
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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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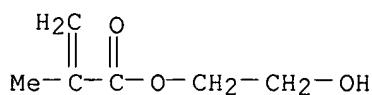
L42 ANSWER 2 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-55-3 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,  
 polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)  
 MF (C23 H36 O2 . C6 H10 O3 . C4 H2 O3)x  
 CI PMS  
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 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

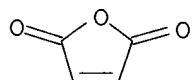
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CM 2

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CMF C6 H10 O3



CM 3

CRN 108-31-6  
CMF C4 H2 O3

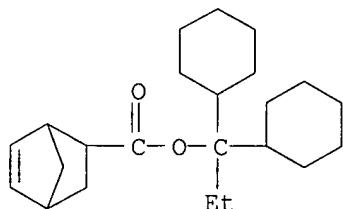
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REFERENCE 1: 140:431398

L42 ANSWER 3 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-54-2 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,  
 polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA INDEX  
 NAME)  
 MF (C23 H36 O2 . C4 H6 O2 . C4 H2 O3)x  
 CI PMS  
 PCT Polyacrylic, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

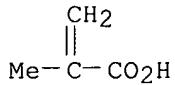
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CM 2

CRN 108-31-6  
CMF C4 H2 O3



CM 3

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CMF C4 H6 O2

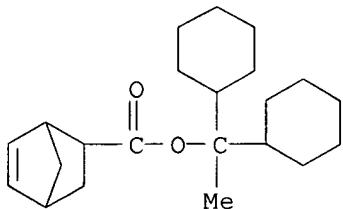
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1 REFERENCES IN FILE CA (1907 TO DATE)  
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REFERENCE 1: 140:431398

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 RN 691390-53-1 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,  
 polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA  
 INDEX NAME)  
 MF (C22 H34 O2 . C5 H8 O2 . C4 H2 O3)x  
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 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

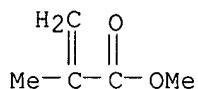
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CM 2

CRN 108-31-6  
CMF C4 H2 O3



CM 3

CRN 80-62-6  
CMF C5 H8 O2

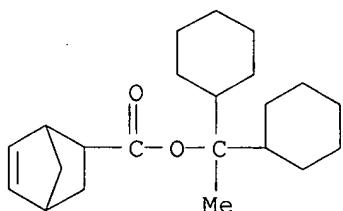
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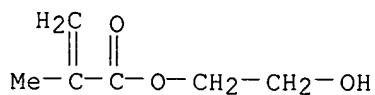
L42 ANSWER 5 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-52-0 REGISTRY  
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 polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)  
 MF (C22 H34 O2 . C6 H10 O3 . C4 H2 O3)x  
 CI PMS  
 PCT Polyacrylic, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-39-3  
CMF C22 H34 O2

CM 2

CRN 868-77-9  
CMF C6 H10 O3



CM 3

CRN 108-31-6  
CMF C4 H2 O3

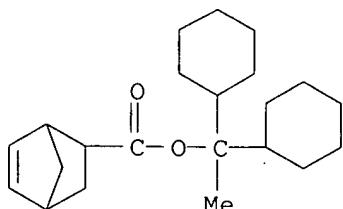
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REFERENCE 1: 140:431398

L42 ANSWER 6 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-51-9 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,  
 polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA INDEX  
 NAME)  
 MF (C22 H34 O2 . C4 H6 O2 . C4 H2 O3)x  
 CI PMS  
 PCT Polyacrylic, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

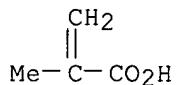
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CMF C22 H34 O2

CM 2

CRN 108-31-6  
CMF C4 H2 O3



CM 3

CRN 79-41-4  
CMF C4 H6 O2

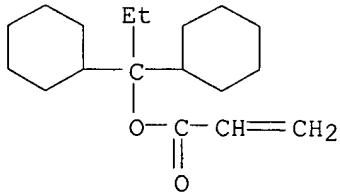
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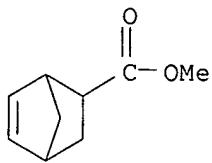
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 RN 691390-50-8 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)  
 MF (C18 H30 O2 . C9 H12 O2 . C4 H2 O3)x  
 CI PMS  
 PCT Polyacrylic, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-47-3  
CMF C18 H30 O2

CM 2

CRN 6203-08-3  
CMF C9 H12 O2



CM 3

CRN 108-31-6  
CMF C4 H2 O3

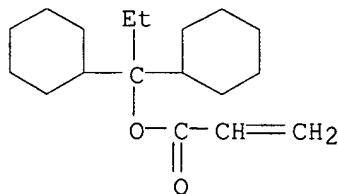
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

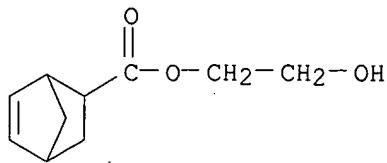
L42 ANSWER 8 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-49-5 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer  
 with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA  
 INDEX NAME)  
 MF (C18 H30 O2 . C10 H14 O3 . C4 H2 O3)x  
 CI PMS  
 PCT Polyacrylic, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-47-3  
CMF C18 H30 O2

CM 2

CRN 37503-42-7  
CMF C10 H14 O3



CM 3

CRN 108-31-6  
CMF C<sub>4</sub> H<sub>2</sub> O<sub>3</sub>

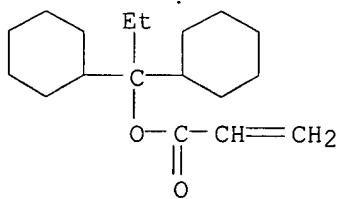
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

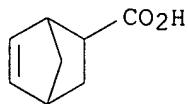
L42 ANSWER 9 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-48-4 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with  
 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
 NAME)  
 MF (C<sub>18</sub> H<sub>30</sub> O<sub>2</sub> . C<sub>8</sub> H<sub>10</sub> O<sub>2</sub> . C<sub>4</sub> H<sub>2</sub> O<sub>3</sub>)  
 CI PMS  
 PCT Polyacrylic, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-47-3  
CMF C<sub>18</sub> H<sub>30</sub> O<sub>2</sub>

CM 2

CRN 120-74-1  
 CMF C8 H10 O2



CM 3

CRN 108-31-6  
 CMF C4 H2 O3

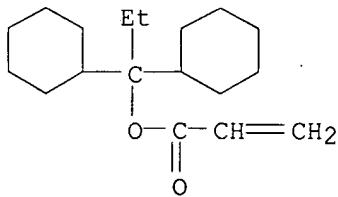


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 10 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-47-3 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN 2-Propenoic acid, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX NAME)  
 MF C18 H30 O2  
 CI COM  
 SR CA



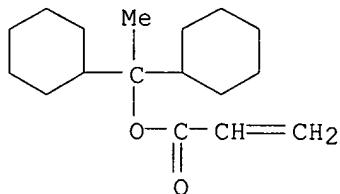
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L42 ANSWER 11 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-46-2 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)  
 MF (C17 H28 O2 . C9 H12 O2 . C4 H2 O3)x  
 CI PMS

PCT Polyacrylic, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

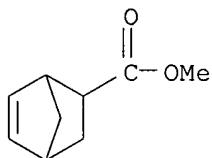
CM 1

CRN 691390-37-1  
 CMF C17 H28 O2



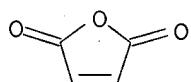
CM 2

CRN 6203-08-3  
 CMF C9 H12 O2



CM 3

CRN 108-31-6  
 CMF C4 H2 O3



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

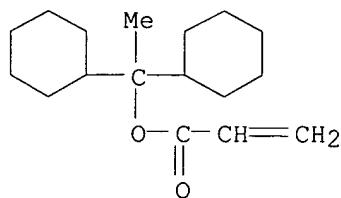
REFERENCE 1: 140:431398

L42 ANSWER 12 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-45-1 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer with 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

MF (C<sub>17</sub> H<sub>28</sub> O<sub>2</sub> . C<sub>10</sub> H<sub>14</sub> O<sub>3</sub> . C<sub>4</sub> H<sub>2</sub> O<sub>3</sub>)<sub>x</sub>  
 CI PMS  
 PCT Polyacrylic, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

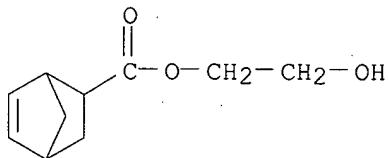
CM 1

CRN 691390-37-1  
 CMF C<sub>17</sub> H<sub>28</sub> O<sub>2</sub>



CM 2

CRN 37503-42-7  
 CMF C<sub>10</sub> H<sub>14</sub> O<sub>3</sub>



CM 3

CRN 108-31-6  
 CMF C<sub>4</sub> H<sub>2</sub> O<sub>3</sub>



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

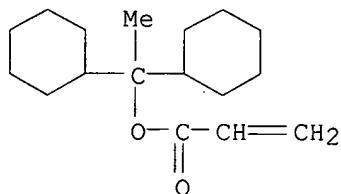
L42 ANSWER 13 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-44-0 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with

1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX  
NAME)

MF (C17 H28 O2 . C8 H10 O2 . C4 H2 O3)x  
CI PMS  
PCT Polyacrylic, Polyether, Polyvinyl  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

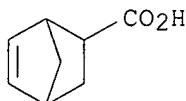
CM 1

CRN 691390-37-1  
CMF C17 H28 O2



CM 2

CRN 120-74-1  
CMF C8 H10 O2



CM 3

CRN 108-31-6  
CMF C4 H2 O3



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

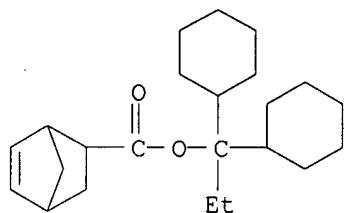
REFERENCE 1: 140:431398

L42 ANSWER 14 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 691390-43-9 REGISTRY  
ED Entered STN: 10 Jun 2004  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,

polymer with 2,5-furandione (9CI) (CA INDEX NAME)  
 MF (C23 H36 O2 . C4 H2 O3)x  
 CI PMS  
 PCT Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-41-7  
 CMF C23 H36 O2



CM 2

CRN 108-31-6  
 CMF C4 H2 O3



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

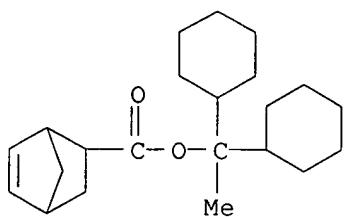
1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 15 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-42-8 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,  
 polymer with 2,5-furandione (9CI) (CA INDEX NAME)  
 MF (C22 H34 O2 . C4 H2 O3)x  
 CI PMS  
 PCT Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-39-3  
 CMF C22 H34 O2



CM 2

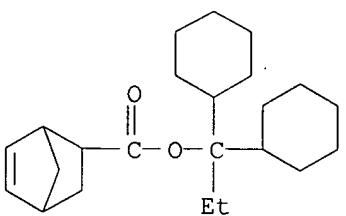
CRN 108-31-6  
CMF C4 H2 O3

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 16 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-41-7 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester  
 (9CI) (CA INDEX NAME)  
 MF C23 H36 O2  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL



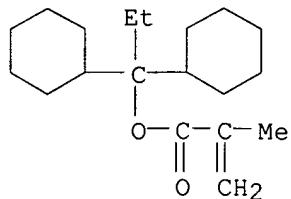
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 17 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-40-6 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX NAME)  
 MF C19 H32 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

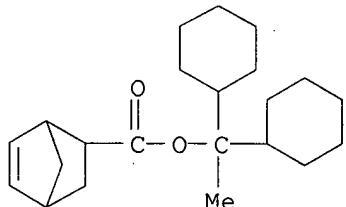


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 18 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-39-3 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)  
 MF C22 H34 O2  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL



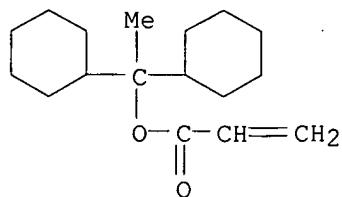
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 19 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 691390-37-1 REGISTRY  
 ED Entered STN: 10 Jun 2004  
 CN 2-Propenoic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)  
 MF C17 H28 O2

CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

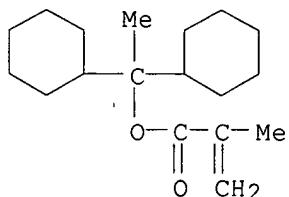
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REFERENCE 1: 140:431398

L42 ANSWER 20 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 615567-80-1 REGISTRY  
 ED Entered STN: 12 Nov 2003  
 CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester, homopolymer  
 (9CI) (CA INDEX NAME)  
 MF (C18 H30 O2)x  
 CI PMS  
 SR CA  
 LC STN Files: CA, CAPLUS

CM 1

CRN 615567-79-8  
 CMF C18 H30 O2

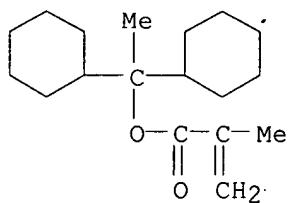


1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:343474

L42 ANSWER 21 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN  
 RN 615567-79-8 REGISTRY  
 ED Entered STN: 12 Nov 2003  
 CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX  
 NAME)  
 MF C18 H30 O2  
 CI COM  
 SR CA

LC STN Files: CA, CAPLUS, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

=&gt; d his

(FILE 'HOME' ENTERED AT 06:48:39 ON 03 JAN 2007)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 06:49:04 ON 03 JAN 2007

L1 1 S US20060019192/PN OR (US2005-533936# OR WO2002-KR2157 OR KR200  
 E SON/AU

L2 2 S E3  
 E SON E/AU

L3 14 S E47  
 E SON EUNK/AU  
 E SON NAME/AU

L4 17 S E4  
 E EUN/AU  
 E KANG/AU

L5 8 S E3  
 E KANG J/AU

L6 1171 S E3, E11, E12  
 E KANG JAE/AU

L7 2 S E3

L8 10 S E21  
 E KANG JAEH/AU

L9 2 S E5  
 E KANG NAME/AU

L10 17 S E4  
 E JAE/AU

L11 1 S E65  
 E JAEH/AU  
 E JAE NAME/AU

L12 1 S E4  
 E KIM/AU

L13 45 S E3  
 E KIM D/AU

L14 634 S E3, E6  
 E KIM DEOG/AU

L15 34 S E4  
 E KIM DEOGB/AU

L16 7 S E4

E KIM NAME/AU  
 L17 343 S E4  
 E KIM J/AU  
 L18 948 S E3  
 L19 1705 S E14-E18  
 E KIM JAE/AU  
 L20 16 S E3  
 L21 46 S E75  
 L22 285 S E111  
 E KIM JAEH/AU  
 L23 56 S E18  
 E DEOG/AU  
 E DONGJIN/PA,CS  
 L24 165 S E29-E35  
 L25 194 S E3,E4  
 E DONG JIN/PA,CS  
 L26 16 S E5-E41  
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 06:56:03 ON 03 JAN 2007

L27 26 S E1-E26  
 L28 STR  
 L29 50 S L28  
 L30 14086 S L28 FUL  
 SAV TEMP L30 CHU533/A  
 L31 140 S L30 AND 103.10/RID  
 L32 STR L28  
 L33 0 S L32 SAM SUB=L30  
 L34 11 S L32 FUL SUB=L30  
 SAV L34 CHU533A/A  
 L35 2 S L34 NOT L27  
 L36 11 S L34,L35  
 L37 STR L32  
 L38 0 S L37 SAM SUB=L31  
 L39 0 S L37 SAM SUB=L30  
 L40 10 S L37 FUL SUB=L30  
 SAV L40 CHU533B/A  
 L41 10 S L40 AND L31  
 L42 21 S L36,L41  
 SAV L42 CHU533C/A  
 L43 124 S L31 NOT L42

FILE 'HCAOLD' ENTERED AT 07:06:27 ON 03 JAN 2007

L44 0 S L42

FILE 'HCAPLUS' ENTERED AT 07:06:31 ON 03 JAN 2007

L45 2 S L42  
 L46 1 S L45 AND L1-L26  
 L47 2 S L45,L46

FILE 'REGISTRY' ENTERED AT 07:07:43 ON 03 JAN 2007

L48 3 S L27 AND CL/ELS  
 L49 2 S L48 NOT MG/ELS  
 L50 STR L32  
 L51 13 S L50 SAM SUB=L30  
 L52 3 S L50 CSS SAM SUB=L30  
 L53 23 S L50 CSS FUL SUB=L30  
 SAV L53 CHU533D/A

FILE 'HCAPLUS' ENTERED AT 07:09:58 ON 03 JAN 2007

L54 8470 S L49  
L55 27 S L53  
L56 1 S L54 AND L55  
L57 2 S L47, L56  
SEL RN L57 2

FILE 'REGISTRY' ENTERED AT 07:10:28 ON 03 JAN 2007  
L58 61 S E27-E87

FILE 'USPATFULL' ENTERED AT 07:11:13 ON 03 JAN 2007  
L59 1 S L42

FILE 'HCAPLUS, USPATFULL' ENTERED AT 07:11:30 ON 03 JAN 2007  
L60 3 DUP REM L57 L59 (0 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 07:11:42 ON 03 JAN 2007

FILE 'HCAPLUS' ENTERED AT 07:12:29 ON 03 JAN 2007

FILE 'USPATFULL' ENTERED AT 07:12:52 ON 03 JAN 2007

FILE 'REGISTRY' ENTERED AT 07:13:19 ON 03 JAN 2007

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